REMARKS

In response to the Office Action dated 24 September 2002, claims 1 and 14 have been amended. Claims 1-14 and 16-26 are pending in the case. No new matter has been added. Reexamination and reconsideration of the claims are respectfully requested.

On page 2 of the Office Action, claims 1-5, 7,14, 16-18, 20 were rejected under 35 U.S.C. 103(a) as being unpatentable over Schultz et al. US Patent 6,058,489 in view of Ofer et al. US Patent 5,887,199. According to the Office Action, Schultz discloses adding at least one drive to a system controller. However, according to the Office Action, Schultz does not disclose the converting data in a first format type on the digital array of storage devices to a format of a second type on the added at least one drive. Nevertheless, according to the Office Action, Ofer discloses a disk array where each drive may have its own block size (format).

Therefore, according to the Office Action, it would have been obvious to one skilled in the art at the time of invention to add a drive of one format to a disk array of a different format.

On page 8 of the Office Action, claims 6, 8, 19 and 21 were rejected under 35 U.S.C. 103(a) as being unpatentable over Schultz et al. in view of Ofer et al., and further in view of Stallmo et al. US Patent 5,875,456. According to the Office Action, Schultz and Ofer disclose the invention substantially as claimed. However, according to the Office Action, Schultz and Offer do not disclose removal of a drive after migration. Nevertheless, according to the Office Action, Stallmo disclose the adding and/or deleting of disks from a managed set of disks.

Therefore, according to the Office Action, it would have been obvious to one skilled in the art at the time of invention to modify the combination of Schultz and Ofer in view of Stallmo.

Applicants respectfully traverse these rejections. Applicants respectfully submit that the cited references, taken alone or in combination, do not disclose, teach or suggest the invention. Applicants respectfully submit that there are patentable differences between the cited references and Applicants' invention as recited in the claims. Applicants' invention differs from the cited references in at least the following respects.

Applicants' invention requires at least "adding at least one drive having a format of a second type to a system controller controlling a predetermined number of storage devices having a format of a first type arranged in a digital array of storage devices to form a system drive and converting data from a storage device having the first format type on the digital array of storage devices to a format of a second type, and migrating the converted data in the format of the second type onto the added at least one drive having a format of the second type."

As admitted by the Office Action, Schultz fails to disclose at least converting data in a first format type on the digital array of storage devices to a format of a second type. Rather, Schultz merely discloses a system disk controller performing on-line reconfiguration when expanding Redundant Arrays of Inexpensive Disks (RAID) arrays. Schultz does not even consider converting data in a first format type to a second format type or migrating the converted data in the format of the second type onto the added at least one drive having a format of the second type.

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Ofer fails to remedy the deficiencies of Schultz. Ofer fails to disclose at least adding

at least one drive to a system controller. Further, Ofer fails to disclose converting data on a

drive in a first format type on the digital array of storage devices to a format of a second type.

Rather, Ofer merely discloses converting data received from a host in a first format type to a

format type of a drive at a back end of the controller. Ofer fails to teach anything about the

migration of data of a first format type on an existing drive to an added drive having a second

format type.

Stallmo fails to remedy the deficiencies of Schultz and Ofer. Stallmo merely discloses a

system that uses various methods for striping and organizing data across the array when disks

are added or removed. However, configuration of the system requires only that the

host/customer/system administrator provide a level of configuration that defines the target

addresses (such as SCSI IDs/Logical Unit Numbers) to which the disk array must respond,

the capacity of the defined target addresses, and whether the data at each target address is to

be protected against the loss of a disk. Thus, Stallmo is silent regarding the migration of data

from a first disk having a first format to a disk having a second format. In fact, Stallmo

teaches away from the present invention because Stallmo requires dividing data blocks on a

plurality of storage devices into a plurality of square portions, wherein a square portion

comprises a number of stripes equal to a quantity of said plurality of storage devices and

exchanging data in sets of these blocks.

Therefore, in view of the above remarks, Applicants' independent claims 1 and 14 are

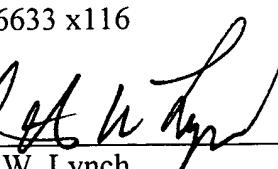patentable over Schultz, Ofer and Stallmo.

Because claims 2-13 and 16-26, which depend directly or indirectly from claims 1

and 14, respectively, include the features recited in the independent claims as well as

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additional features, Applicants respectfully submit that claims 2-13 and 16-26 are also patentably distinct over the cited references. Nevertheless, Applicants are not conceding the correctness of the Examiner's rejection with respect to such dependent claims and reserves the right to make additional arguments if necessary.

On the basis of the above amendments and remarks, it is respectfully submitted that the claims are in immediate condition for allowance. Accordingly, reconsideration of this application and its allowance are requested.

If a telephone conference would be helpful in resolving any issues concerning this communication, please contact Attorney for Applicants, David W. Lynch, at 651-686-6633 Ext. 116.

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